blinded to presence of MS. Associations were assessed by logistic regression.
Results: The study included 3,528 subjects; 67% were male; age averaged 63±12 years; 57.7% had significant (≥70% stenosis), 11.1% mild/moderate, and 31.0% no CAD (<10% stenosis). MS was present in 48% of patients; specifically, 39% had high FG; 52% high TG; 71% low HDL; 76% high S/DBP; and 58% high BMI. MS predicted increased risk of significant CAD (odds ratio [OR] of significant vs. no CAD= 1.40, 95% CI 1.21-1.62, p<0.001). High FG (OR=1.91, CI 1.63-2.23, p<0.001) and low HDL (OR=1.38, CI 1.18-1.62, p<0.001), but not TG, BP, or BMI, were individually predictive of CAD. In multivariable modeling, CAD was predicted by age, gender, high FG (OR=1.75, CI 1.48-2.06), and low HDL (OR=1.45, CI 1.22-1.72)(all p<0.001). Similar results (with somewhat greater OR for FG, HDL) were found when restricting analysis to younger subjects (males<55 years, females <65 years).
Conclusion: In a large, prospective observational study, the MS was predictive of CAD, and PV was carried by high FG and low HDL. FG and HDL deserve particular attention in risk factor assessment and prevention in subjects at risk for CAD.

1050-105 **The Medicine, Angioplasty, or Surgery Study (MASS II Registry): A Comparison of Diabetic and Nondiabetic Patient's Outcome in Medical Therapy, Coronary Angioplasty, and Bypass Surgery During the First Year Follow-Up**

Paulo R. Soares, Whady Hueb, Bernard J. Gersh, Desiderio Favarato, Luiz M. Cesar, Protasio L. Luz, Sergio A. Oliveira, Jose F. Ramires, Heart Institute Medical School University of Sao Paulo, Sao Paulo, Brazil, Mayo Clinic, Rochester, MN

Diabetes is known to have a worse prognosis among patients with coronary artery disease. In MASS II Registry we compared medical treatment (MT), surgery (CABG) and angioplasty (PCI) in patients with multivessel coronary disease. The present study compared the one-year outcome of the patients divided in two subgroups: diabetic (D) and non-diabetic (ND) patients in each of the therapeutic options. 1080 patients were treated with CABG (451), PCI (305) and MT (324). The primary end point was considering as the composite events (CE) of cardiac-related deaths, myocardial infarction (MI) and new revascularization (NR) in the first year of follow-up. The results are presented in the table 1.
Conclusion: In MASS II Registry during the first year follow-up study there were no statistical differences in the frequency of composite events between diabetic and non-diabetic patients in each of the three therapeutic groups. On the other hand, when outcomes were compared among patients undergoing PCI, CABG or MT, there was a statistically significant benefit for CABG on the therapy in diabetic patients..

Table 1

Group		N	Death %	MI %	NR %	CE %
PCI	D	75	5.3	2.7	8.0	16.0
	ND	230	2.6	6.5	10.9	20.0
	Total	305	3.3	5.6	10.2	19.0
CABG	D	154	3.9	0.6	0.0	4.5*
	ND	297	2.7	1.0	0.3	4.0
	Total	451	3.1	0.9	0.2	4.2
MT	D	115	5.2	1.7	6.1	13.0
	ND	209	1.4	1.9	5.7	9.1
	Total	324	2.8	1.9	5.9	10.5

*CABG vs MT vs PCI, p=0.0028

POSTER SESSION

1068A-MP Moderated Poster Session...Hyperglycemia and Diabetes in Acute Coronary Syndromes II

Sunday, March 30, 2003, 3:00 p.m.-4:00 p.m.
McCormick Place, Hall A

3:00 p.m.

1068A-MP-203 **Acute Hyperglycemia Abolishes Ischemic Preconditioning: A Possible Mechanism for Adverse Outcome of Patients With Acute Myocardial Infarction and Acute Hyperglycemia**

Masaharu Ishihara, Ichiro Inoue, Takuji Kawagoe, Yuji Shimatani, Satoshi Kurisu, Kenji Nishioka, Takashi Umemura, Shuji Nakamura, Masashi Yoshida, Hiroshima City Hospital, Hiroshima, Japan

Background. Acute hyperglycemia has been shown to be an independent predictor of adverse outcome after acute myocardial infarction (AMI). Prodromal angina occurring shortly before the onset of AMI has cardioprotective effect by the mechanism of ischemic preconditioning. Ischemic preconditioning is promoted by opening of mitochondrial K_{ATP} channel. K_{ATP} channel is also located in pancreas ß cells. K_{ATP} channel in pancreas ß cells is closed by glucose and regulates insulin release.
Purpose. This study was undertaken to assess the interaction between acute hyperglycemia and ischemic preconditioning in patients with AMI.**Methods.** We studied 549 patients with a first anterior wall AMI who underwent coronary angiography within 12 hours after the onset of AMI. Acute hyperglycemia was considered to be present if patients had plasma glucose>11.1 mmol/L (200 mg/dl) on hospital admission. Prodromal angina was defined as angina episode(s) occurring within 24 hours before the onset of AMI. Serial measurements of left ventricular ejection fraction (LVEF) were obtained in 434 patients (79%) before reperfusion therapy and before discharge.
Results. In 377 patients without acute hyperglycemia, prodromal angina was associated with significantly larger improvement of LVEF (10.1±13.6% vs 5.9±13.3%, p=0.015) and lower 30-day mortality (0% (95% CI 0-3.0) vs 6.7% (4.2-10.5), p=0.001). However, in the presence of acute hyperglycemia (n=172), there was no significant difference in the change in LVEF (5.6±9.9% vs 5.4±13.3%, p=0.94) and 30-day mortality (8.1% (95% CI 3.5-17.5) vs 8.2% (4.4-14.8), p=0.98) between patients with prodromal angina and patients without. Multivariate analysis showed that prodromal angina was an independent predictor of predischarge LVEF in patients without acute hyperglycemia (p=0.019) and not in patients with acute hyperglycemia (p=0.96).
Conclusion. Acute hyperglycemia abolished ischemic preconditioning effect of prodromal angina. Our findings may provide a potential explanation for the adverse outcome of patients with AMI and acute hyperglycemia.

3:15 p.m.

1068A-MP-204 **Impact of Diabetes on Clinical, Echocardiographic, and Electrocardiographic Characteristics of Myocardial Infarction**

Costantina Manes Marc A. Pfeffer, John D. Rutherford, Sally Greaves, Jean-Lucien Rouleau, Scott D. Solomon, Brigham & Women's Hospital, Boston, MA

Background: Diabetes influences the clinical presentation and course of acute myocardial infarction (AMI). We investigated the impact of diabetes on clinical, echocardiographic and electrocardiographic characteristics of 272 pts with Q-wave anterior AMI enrolled in the Healing and Early Afterload Reducing Therapy (HEART) Trial . **Methods:** Patients underwent ECG testing within 24h (baseline) and at predischarge (median day 7) after AMI, and echocardiography at baseline and at 14 days. From both ECGs we calculated the Selvester QRS score, the sum of ST segment elevation and the number of negative T waves in leads I, avL, V1-V6. Left ventricular ejection fraction (LVEF) and infarct segment length were assessed by echocardiography. **Results:** Diabetics (n=56, 20.6%) were similar to non-diabetics (n=216, 79.4%) with respect to initial and 14-day infarct size as evidenced by maximal CK, ejection fraction and infarct segment length (Table). However, diabetics demonstrated a higher Killip class, greater QRS score at baseline and predischarge and fewer negative T waves on predischarge ECG, even after excluding patients with prior myocardial infarction (n=43, 16%). **Conclusion:** Diabetes may modify the clinical and electrocardiographic response to myocardial infarction independently of infarct size or ventricular function.

	Diabetics (n=56)	Non-Diabetics (n=216)	P value
Age, yr	60.8 ± 10.9	59.6 ± 13.1	0.5
Killip Class >1, %	34%	19%	0.01
Maximal CK, mU/mL	2593 ± 1887	2484 ± 2012	0.71
Baseline LVEF, %	51.6 ± 10.1	52.2 ± 9.4	0.67
Baseline Infarct Segment Length, %	27.2 ± 9.8	25.8 ± 11.0	0.36
Day 14 LVEF, %	54.5 ± 10.3	56.5 ± 8.9	0.14
Day 14 Infarct Segment Length, %	20.6 ± 12.2	17.9 ± 13.0	0.16
Baseline Sum ST Elevation, mm	11.5 ± 9.2	10.5 ± 7.9	0.44
Baseline Number Negative T waves	0.7 ± 1.4	0.8 ± 3.2	0.85
Baseline QRS Score	4.3 ± 2.9	3.4 ± 2.6	0.03
Predischarge Sum ST Elevation, mm	4.5 ± 3.0	4.6 ± 3.3	0.9
Predischarge Number Negative T waves	1.4 ± 1.7	2.6 ± 2.2	0.001
Predischarge QRS Score	5.2 ± 3.1	4.0 ± 2.5	0.01

3:30 p.m.

1068A-MP-205 **Impact of Known and Newly Diagnosed Diabetes Mellitus After a Myocardial Infarction**

David Aguilar, Scott D. Solomon, Lars Kober, Jean-Lucien Rouleau, Hicham Skali, John J. McMurray, Gary S. Francis, Marc Henis, Rafael Diaz, Yuri N. Belenkov, Sergei Varshavsky, Jeffrey D. Leimberger, Robert M. Califf, Marc A. Pfeffer, Brigham & Women's Hospital, Boston, MA

Background: Diabetes mellitus (DM) is associated with adverse outcomes in patients (pts) presenting with an acute myocardial infarction (AMI), but little is known of the risk of newly diagnosed DM.
Methods: The VALsartan In Acute myocardial iNfarcTion (VALIANT) trial identified 14,808 pts with an AMI complicated by either clinical or radiologic signs of heart failure and/or evidence of left ventricular (LV) systolic dysfunction. Assessment of diabetic sta-